

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION OF  
KOIDE et al.

Appln. No.: 09/711,908

Filed: November 15, 2000

Title: METHODS FOR MANUFACTURING A LIGHT-EMITTING DEVICE

Confirmation No.: 8191

Group Art Unit: 2814

Examiner: Louie, Wai Sing

July 10, 2002

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RESPONSE UNDER 37 C.F.R. § 1.111

Hon. Commissioner of Patents  
Washington, D.C. 20231

Sir:

In response to the Office Action dated April 10, 2002, please enter the following remarks:

REMARKS

Claims 21-32 are pending. Reconsideration and allowance of the present application based on the following remarks are respectfully requested.

Claim Rejections Under 35 U.S.C. § 112

Claims 21-27 were rejected under 35 U.S.C. § 112, first paragraph. Applicants respectfully traverse this rejection.

The Office Action alleges that the formula wavelength  $\lambda$  (nm) =  $1239.8/E_g$  (eV), such that the emitted light has an energy level  $E_g < 3.4 * (1 - X) + 1.95 * X - 1.0 * X * (1 - X)$  is not supported. However, as indicated on page 11, lines 10-25 of the originally filed specification, it is desired that the indium mole fraction, X, be less than that calculated by a conventional relationship, i.e. where  $E_g = 3.4 * (1 - X) + 1.95 * X - 1.0 * X * (1 - X)$ . Accordingly,  $E_g < 3.4 * (1 - X) + 1.95 * X - 1.0 * X * (1 - X)$  guarantees that the value of X is less than the value of X calculated using a conventional method for a given  $E_g$ . Similarly,  $E_g = 3.4 * (1 - X) + 1.95 * X - 4.26 * X * (1 - X)$  described as an embodiment of the present invention, also guarantees that the mole fraction X, is less than the value of X calculated using a conventional method. Accordingly, Applicants respectfully submit that the